AREVA in Niger

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February 2005

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NIGER AND URANIUM

Niger is the second poorest country in the world[1] but it has natural resources underground in the form of uranium ore deposits. Uranium mining accounts for a third of exports (EUR 100 million), 5% of the country's GDP which amounts to EUR 2 billion and the tax receipts derived from it amounts to 4% of Niger's tax revenue.

One of the world's largest uranium deposits lies on the western side of the Aïr mountains. In 2003, for the first time in the history of the country, systematic radiometric prospecting was carried out by means of an aerial survey. It revealed a significant quantity of surface uranium over an area of 4,500 sq.km, which is half of the surface area of the Ile-de-France.

Uranium in Niger is currently mined by two companies incorporated under Nigerien law: SOMAIR and COMINAK, operated by the principal shareholder AREVA (through its subsidiary COGEMA). SOMAIR and COMINAK hold an operating license to work the deposits in a 360 sq.km area of the Arlit region in the north-east of the country, located over 1,200 km by road from the capital Niamey. Each mine has its own ore processing plant. The towns of Arlit and Akokan were built around the mines and now form an urban area that is home to some 70,000 inhabitants.

Since their creation in the late 1960s, the two mining corporations have mined over 90,000 tons of uranium. To put this into perspective, the French production of uranium between 1946 and 2000 was 76,000 tons. The annual production of the two mines is equivalent to over a third of the annual requirement of the French power utility Electricité de France (EDF). Niger is the 3rd largest supplier of uranium to the European Union with 18% of purchases by electricity generating companies after Russia and Canada.

Known deposits will not be exhausted for another 10 to 15 years. On account of the region's potential, in November 2004 AREVA made four new license applications to explore new deposits and prolong operations with a view to sustainable development.

SOMAÏR Key Figures (Sociétés des Mines de l'Aïr,* Aïr Mining Corporations*)

-Shareholders: COGEMA 63.4%, ONAREM (*Office national des Ressources Minières*) 36.6%.

-Annual sales figures: approximately 36 million euros.

-Production: 1,277 tons in 2004. 100% production purchased by AREVA.

-Total cumulative production since mining began: approximately 42,000 tons uranium.

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1 Niger (10.6 million inhabitants over a surface area of 1,267km2) comes 172nd out of 173 countries according to the United Nations for Development Program development indicator: the literacy rate is 16%, 63% of the population live below the national poverty threshold, life expectancy at birth is 45 years, 20% of the population have access to appropriate sanitation and 60% of the population have access to an improved water source.

- Open-pit mines - depth 50 to 70 meters.

- Horizontal sedimentary formation 7 km north-west of the town of Arlit.

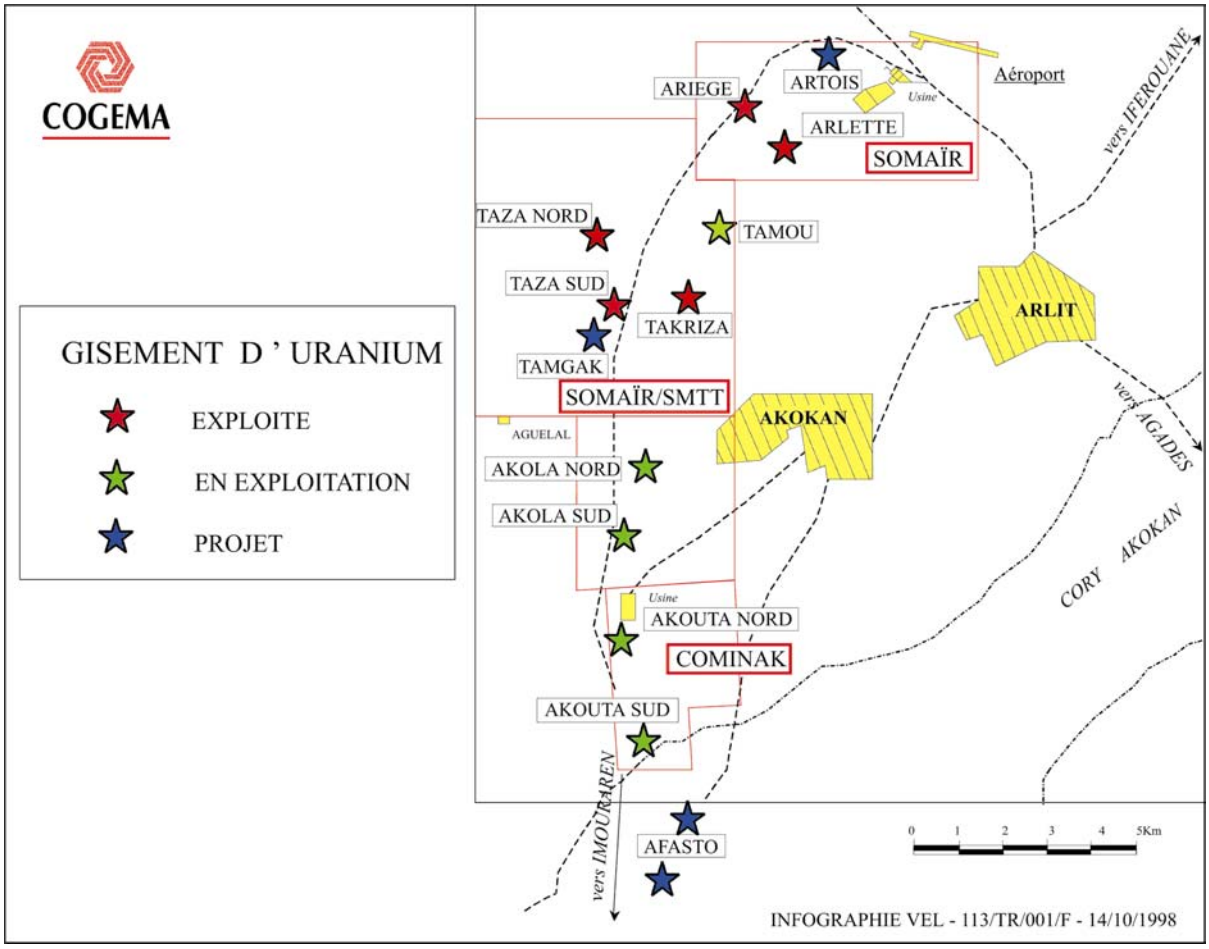
- Mineral processing plant near the mine producing yellow cake.

- Uranium content of the ore: approximately 3 kg uranium per ton

- Reserves: 13,500 tons of uranium can still be extracted from the mineral deposits of Tamou, Ariège and Artois. At the present rate, these deposits will provide 11 years' forward production. Additional resources amounting to some 17,000 tons of uranium will be able to be developed.

- Employees: 572 employees, including 5 French expatriates.

- Legal framework: a long-term agreement with the Nigerien state determines the legal and fiscal framework under which the corporation operates until December 31st 2013.



- Key dates:

February 2, 1968	Creation of SOMAÏR
January 1971	Production of the first batch of yellow cake
1981	Record production year: 2,100 tU
1994	Extension of the agreement until December 31, 2013
1996	Mining of the Takriza section
1999	Mining of the Tamou section
2001-2002	Re-commencement of research as part of the TAGORA project and discovery of new resources
2003	Extension of the agreement until December 31, 2013
2004	Feasibility of the Artois Mineral Deposit

COMINAK key figures (Akouta Mining Corporation)

- Shareholders: COGEMA 34%, ONAREM 31%, OURD(Japan) 25%, ENUSA (Spain) 10%.

-Annual sales figures: approximately 65 million euros.

-Production: approximately 2,005 tons of uranium in 2004. 997 tons were purchased by COGEMA, the rest was purchased by the Japanese corporation OURD and the Spanish corporation ENUSA. Since 1978, COMINAK has produced over 52,000 tons of uranium.

- Underground mine Akouta - depth of 250 meters with over 250 km of galleries (the largest underground uranium mine in the world).

- Horizontal sedimentary formation

- Ore processing plant at the pit head producing magnesium uranate.

- Uranium content of the ore: approximately 4.5 kg uranium per ton.

- Reserves: the areas of Akola, north Akouta and Afasto will take 10 years to mine at the current rate. The development of additional resources already inventoried will provide another 5 years of operation.

- Employees: 1,057 employees, including 5 French expatriates.

- Legal framework: a long-term agreement with the Nigerien state determines the legal and fiscal framework under which the corporation operates until December 31, 2013.

- Key dates:

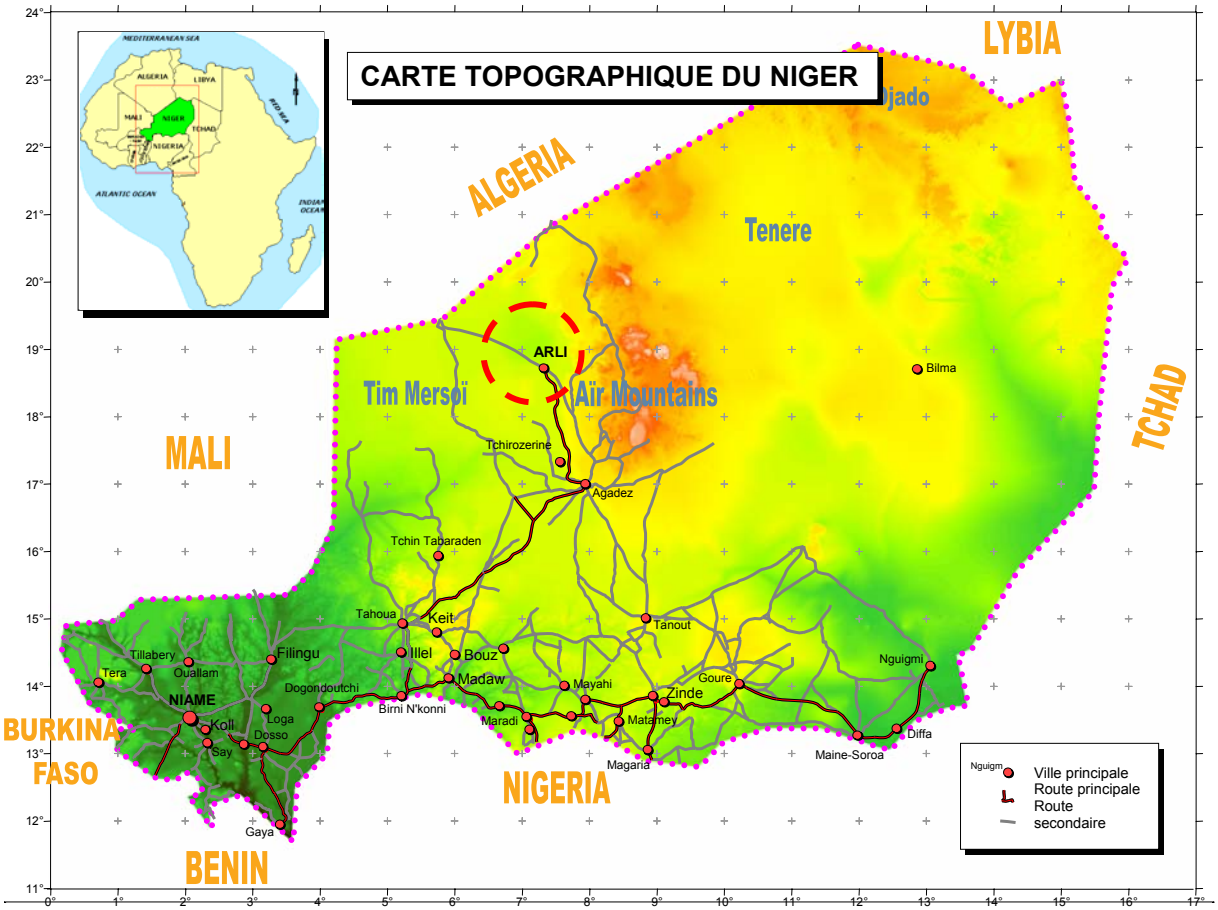
June 1974	Creation of COMINAK
August 1978	Production of the first batch of uranate by COMINAK
1982	Farm-out of the perimeter of Akola to COMINAK and mining begun.
1998	Record production in the region of 2200 tU
2002	Signing of an additional clause to the agreement providing for the development of the West AFASTO sector.
2002	AFASTO Feasibility Study

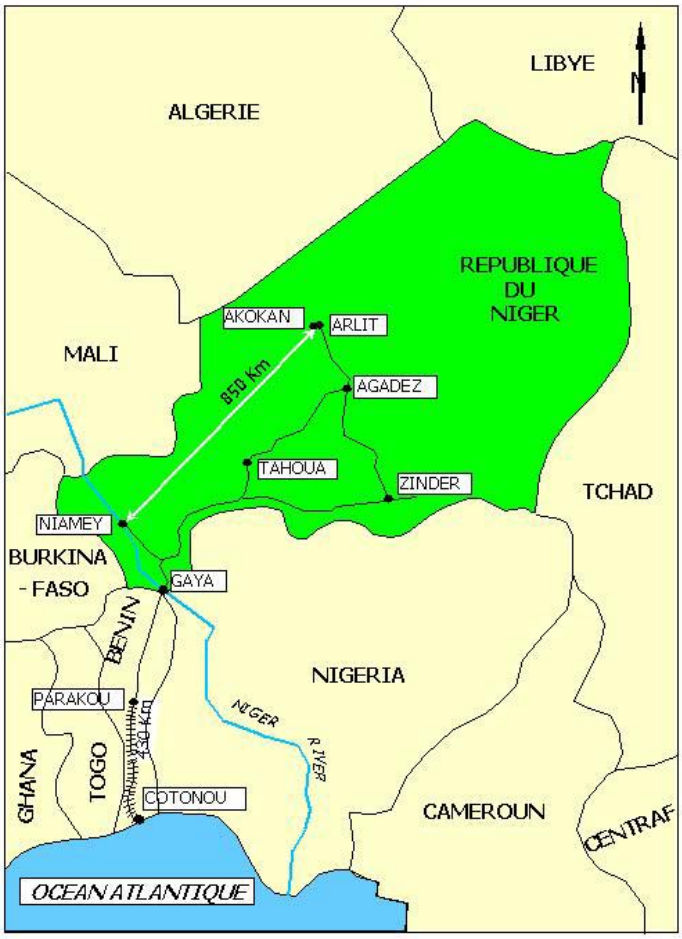
Conversion of Nigerien Uranium

The yellow cake obtained in the ore processing plants in Niger is natural uranium concentrate with a uranium content of approximately 75%.

Refining operations (to remove impurities) and conversion is carried out by Comurhex, a subsidiary of AREVA.

- The Comurhex-Malvési plant converts the mined concentrates into UF4 (uranium tetrafluoride).
- The Comurhex-Pierrelatte plant converts the UF4 into UF6 (uranium hexafluoride), a gaseous compound used for enrichment by gaseous diffusion at the Eurodif plant.

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GHANA
TOGO
COTONOU
CAMEROUN
CENTRAF
OCEAN ATLANTIQUE

WORKING CONDITIONS RADIOLOGICAL PROTECTION

Nigerien personnel have a good safety culture and the frequency of accidents at work is lower than that found in the French industry. Over a period of fifteen years, the average accident frequency rate has dropped from over 50 to less than 10 (7.6 on average for both corporations in 2004).

With respect to the radiological protection of workers, Recommendation No. 60 of the International Commission on Radiation Protection (ICRP) and Euratom Directive 96/29 sets the maximum exposure of an employee at 100 millisieverts in a 5 year period (mSv) and 50 mSv in any one year. For world specialists at the ICRP, this limit ensures there is no impact on health. This standard has been written into Nigerien law (it sets the maximum annual dose for a miner at 50 mSv in order to be sure not to exceed 100 mSv in a 5 year period).

In 2002, AREVA set the annual limit at 20mSv for all its activities. In order to achieve this result, the Nigerien mines set themselves a maximum operational target of 18 mSv per employee. This undertaking necessitated a change in working methods and major improvements in COMINAK's underground mine. The objective was reached in December 2003. Thus, the criteria for the radiological protection of the workers comprise the same requirements as those in force in Europe.

1,197 COMINAK and SOMAÏR employees, in addition to 287 subcontracted workers are radiologically monitored. Each year approximately 30,000 measurements are taken at work stations on both sites.

The radiation dose history is kept for each employee exposed and records the consolidated results for each work zone and level of exposure.

Information and awareness campaigns are organized regularly by the Safety and Radiological Protection Service. These activities currently benefit from the increase in the level of schooling of new employees.

ENVIRONMENTALLY FRIENDLY OPERATIONS

An ISO 14001 Certified Environmental Management System

SOMAÏR and COMINAK are the only environmentally certified corporations in Niger and number among the ten or so certified corporations in Western Africa. SOMAÏR and COMINAK have environmental management systems that conform to international standard ISO 14001. They were certified by the AFAQ in 2002 and 2003 respectively.

Radiological Protection of Surrounding Populations

The decree of January 8, 2001 covers European regulations and sets a limit for members of the public at 5 mSv cumulative dose over a period of 5 years.

This limit is complied with around the mines and in the neighboring towns of Arlit and Akokan. The exposure of neighboring populations is, on average, lower than 0.5 mSv per year which is equivalent to an X-ray. Values range from 0.3 to 1 mSv.

The network that monitors radiation in the environment and populations concerns different exposure vectors:

- For the air:13 measuring stations - three are located in the towns of Arlit and Akokan. Six are located on routes used by nomadic peoples. Three are sited at the pit heads of the two mines. One is located outside the area affected by mining activities for reference purposes. Approximately 750 measurements are taken each year. They concern external exposure to gamma radiation, internal exposure by inhalation of radon and particles of dust suspended in the air.

- For water: Samples are taken every 6 months for uranium 238 and radium 226 analyses (118 analyses in 2004). In addition to radiological monitoring, the water consumed is also chemically and bacteriologically analyzed (700 analyses per year).

- For the food chain: Samples are taken once a year. About sixty analyses are carried out to check for Radium 226, Uranium 238, Lead 210 and Thorium 230 activity.

- For soil: Soil samples are taken from 56 points on 7 parallel sampling lines spaced at a distance of 4 km apart leading from the sites towards the outer edges and following the direction of the prevailing North-North East to South-South West winds (130 analyses). Radials are located in a perimeter of 20 km x 25 km encompassing the mines. Marking is localized to the mining area, as confirmed by the aerial radiometric survey in 2003.

Preservation of Ecosystems

There are specific aspects to the impact on the environment of mining activities in a desert area.

- *Water*

Since the site was opened in the sector in the late 60s, proper water management has been a major concern: Water is the main natural resource that is necessary for the daily life of the populations and the proper operation of industrial activities but low rainfall means the natural reservoirs are not replenished.

Groundwater must be removed from open pit or underground mines. This process is known as dewatering. The water is not fit for human consumption and is used for industrial purposes.

There are several reserves of fossile water on the mining sites. Only water from one of them is extracted for consumption and a detailed assessment of it is in progress. A preliminary study carried out in 1968 estimated their volume at 1.3 billion cubic meters. The volume extracted since the outset is 255 million cubic meters. Annual consumption, which has declined consistently for several years, is approximately 7 million cubic meters. 65% of this volume supplies urban areas. (Monthly) bacteriological, (biennial) radiological and (annual) chemical analyses show there to be no contamination.

- *Dust and Mine Tailings*

Open pit mining (explosive blasts, heavy vehicle work) creates dust. Mining corporations monitor the radioactivity of dust in the area using and dust samplers and dosimeters.

Processing waste storage areas are sited on impermeable clayey layers. A network of piezometers installed at a medium depth ensures there is no infiltration. Deep level sampling is carried out every month and confirms the absence of radionuclides.
An indurate sulfate crust several centimeters thick forms on the surface as a result of intense evaporation and ensures the absence of dispersion.

- *Waste*

Everything possible is done to prevent waste. SOMAÏR and COMINAK recycle reagents and resources such as mine drainage water and oils used during operation. These activities go some way to reducing waste.

- *Disposal of Material*

Radiological inspections and, where necessary, decontamination are carried out on all material disposed of by the operators in the public domain. SOMAÏR and COMINAK are working to improve control of scrap pilferage. SOMAÏR and COMINAK give away non-contaminated material that can be reused by tradesman or members of the local population (for example, around 5000 soda drums after cleaning, are donated annually and used to build homes, animal shelters, etc.).

- *Continuous Progress Plan*

In line with the AREVA WAY (rules for management by continuous progress throughout the whole of the group), COMINAK and SOMAÏR are committed to plans for continuous improvement. These concern the following:

- The processing and containment of waste;
- Monitoring the exposure of employees and neighboring populations to radiation;
- Particles of uranium dust in the atmosphere;
- Water resources (plan of action launched in 2005 to improve the management of the underground water reserves and reduce consumption);
- The recycling and disposal of industrial waste

External Information and Monitoring

All economic, social and environmental data related to the impact of mining activities in Niger are published. They are available in the two mines' environmental reports.

SOMAÏR established a partnership with the NGO Aghir In'Man, an association committed to the preservation of the environment and a local conciliation committee, the only one of its kind in Africa. The two mining corporations plan to form a common information committee in the near future.

The SHERPA association asked for and was granted permission to visit SOMAÏR and COMINAK's industrial installations and health facilities.

Inspections were carried out by officers from the mines service and the *Centre National de Radio protection,* Center for Domestic Radiological protection (CNRP). The CNRP was set up by the IAEA which monitors it regularly. Its on-site inspections are carried out periodically and reported. The level of the teams is high. In particular, the CNRP has its own gamma radiation monitoring network around the mines.

In addition to monitoring audits and the renewal of ISO 14001 certification (by AFAQ), AREVA carries out audits, or has them carried out, regularly in different areas usually concerning safety, health, the environment and transport.

In 2004, for example, AREVA asked the Institute for Radiological Protection and Nuclear Safety (IRSN), which brings together French expertise in nuclear safety and radioprotection in the service of the public authorities, to carry out an audit on environmental monitoring and the radiological impact of SOMAÏR and COMINAK. This decision was made in the context of an environmental policy applied throughout the whole group in 2003 whereby each industrial site is obliged to have radiological and chemical impact studies and action plans carried out.
The National Center for Radiological Protection, CNRP, was associated with this audit.

Provision for Site Rehabilitation Studies

Rehabilitation studies based on AREVA's international experience in this area by were begun in 2002. Having taken account of the geographic location of the two mining sites, work concerns radiological monitoring, preservation of potable ground water and processing of the stockpile of mine tailings in particular.

PRODUCTION TRACEABILITY

AREVA, the operator of SOMAÏR and COMINAK, ensures that uranium production, including during transportation to chemical conversion plants, is entirely traceable.

- On site, encapsulation is automated, the drums are numbered, weighed and sealed under the surveillance of customs officers (450 to 600 kilo per drum).
- Storage while awaiting shipment is monitored.
- Plant entry and exit tonnage is monitored and systematically recorded.
- Transportation is by road and rail and escorted to the port of shipment at Cotonou in Benin. Under the surveillance of customs officers, the sealed drums are placed in sealed containers.
- Yellow cake is shipped by boat to the French port of Montoir. After 3 weeks at sea, the load reaches the Comurhex-Malvési plant (Aude)
- The IAEA is systematically informed of the level of production.

The entire production of the two mines is now purchased by three shareholders: AREVA, the Japanese corporation OURD and the Spanish corporation ENUSA (The *Office national des Ressources Minières du Niger*, National Office of Mining Resources of Niger, ONAREM, the 4th shareholder was a buyer of part of the production until the mid 80s).

All production and sales figures have been published since the two mines began operations - export orders and Nigerien Official Gazette.

LOCAL ECONOMIC DEVELOPMENT

Priority Local Employment and Transfer of Knowledge and Expertise

The 1,650 employees of the two mines directly and indirectly provide a livelihood for 70,000 people.

99% of 1,650 positions are held by Nigerien nationals, whereas 500 were held by expatriates in the early 80s. The dozen or so expatriates currently in managerial positions ensure transfer of knowledge and expertise.

Nigerien nationals in upper managerial positions are engineers educated in the *Grandes Ecol*es in France and trained on the group's mining sites in France. The mining companies initiated the creation of a school in Agadez to train mining technicians and supervisors (EMAÏR). In order to foster expertise and experience sharing, AREVA employs Niger origin managers in other corporations in France and Canada in particular.

Preparing for the Future

The renewal of mining reserves is a constant source of concern for both corporations. The Afasto (COMINAK) and Artois (SOMAÏR) ore bodies give the two companies a visibility of 10 to 15 years. AREVA has also recommenced exploration of a larger area.

Thereafter:

- For the last 3 years AREVA has been financing a vast program to discover longer term resources. The aerial geophysical regional survey carried out in 2003 (regular and systematic grid) was an important point in renewed exploration.

- AREVA examines all non-mining projects liable to develop natural resources and sustainable development in the region. SOMAÏR and COMINAK are SONICHAR shareholders and their main customers. This coal mining corporation provides electricity for the whole region including Agadez and dispenses with the need for importing petroleum products.

In compliance with Nigerian law, provision has been made for future rehabilitation programs the cost of which is currently being evaluated.

STRENGTHENING OF THE HEALTHCARE SYSTEM

The AREVA mining sites are located in a desert area. The towns of Arlit and Akokan have more than 70,000 inhabitants. SOMAÏR and COMINAK employ 1650 people from the two towns which amounts to a total of some 21,000 people including families (with an average of eight children).

The mining corporations provide free medical care for employees and their families. AREVA employs the same policy as in France for its miners.

This policy led SOMAÏR and COMINAK to build and manage two hospitals. The SOMAÏR hospital is in Arlit and the COMINAK hospital is in Akokan. The majority of medical care is given there (surgery, maternity, dental, otorhinolaryngology, ophthalmology, etc.) Their budget is 3.5 million euros per year (personnel cost, medicine, medical services). The hospitals have a capacity of 151 beds. The recently built public hospital underwent an optimization program that was closely linked to the two private hospitals.

Patients that cannot be treated in these hospitals are taken to Niamey or Europe.

These establishments are open to the rest of the population of the region which, in fact, is the region in which the people of Niger receive the best health care. SOMAÏR and COMINAK employees and their families, account for two thirds of all patients treated and the operating costs of the two hospitals. Health care provided to the rest of the population represents a third of the treatments given but over 50% of major surgery or treatment.

Allergies (pulmonary, otorhinolaryngological, ophthalmological) are the most frequently encountered pathologies. These problems are found throughout the Saharan area. They are typical of desert areas and have long been recorded as such by the WHO. They are attributable to the aggressive action of the sand in eyes and lungs and are not related to the mining industry.

Cases of cancer are particularly rare. In 40 years of operation, no cancer thought to be caused by exposure to ionizing radiation has been detected. Cancer is first and foremost an illness typical of western countries with high levels of pollution and consumption of rich food, tobacco and alcohol.

Annual Health Care Figures for the SOMAÏR and COMINAK Hospitals

DESCRIPTION	NUMBER
Hospital consultations	157,000
Doctor consultations	40,000
Minor surgery	4,550
Major surgery	500
Deliveries	850
Vaccinations	6,650

DEVELOPMENT OF INFRASTRUCTURE

Education

SOMAÏR and COMINAK contribute to the funding of schools in Arlit and Akokan (construction of buildings, equipment, etc.), in particular two schools directed by the waged relations of the corporations and which have over 1500 pupils. A program providing schooling for children and training for adults was set up when mining operations began.
COGEMA and its subsidiaries are also associated with aid projects providing schooling for the children of the nomadic peoples in the Arlit area and in the foothills of the Aïr mountains in particular.

Water

The two corporations, who developed the underground water reserves, have provided a potable water supply to Arlit and Akokan for over 30 years.
Optimization programs are underway and consumption has been reduced through improved management of the network and awareness campaigns aimed at local populations.
In addition, the corporations provide occasional aide for the drilling of wells, the extraction of water and planting of market garden crops.

Transport

A 685 km asphalted road from Tahoua to Arlit was built by the two mining corporations between 1978 and 1980. It opens up the region linking it to the west African network: The road serves the Agadez and Arlit regions from the south of the country. This infrastructure represents an investment of the order of 260 million euros.

Appendix 1: AREVA Mining Activities

Key Figures

	2003	2002	2001
Turnover (Millions of euros)	443	536	489
End of year total	1,545	1,565	1,509

Functions

The four main activities of the AREVA Mining Business Unit are exploration, mining, the processing of uranium ore and rehabilitation of the sites at the end of operations. Staff are mainly located in Africa, North America, Europe and Kazakhstan. There are also teams in Australia (production of ore and exploration).

The group's mining activities mainly concern uranium. There is a relatively abundant supply of uranium in the earth's crust over which it is uniformly spread and contains three principal isotopes: over 99% non fissionable U238; 0.7% fissionable U235 and a very small proportion of U234.

Aerial geophysical surveys (made possible by radiation emitted by the ore) and geochemical and geological exploration are carried out before detailed prospecting work on the ground (test boring). After confirmation of the potential of the discoveries, a smaller grid is used to calculate the resources and check that they are technically and economically viable (reserves). These operations are usually subject to research licenses being granted and take from 10 to 15 years for an average cost estimated at 50 million euros per mineral deposit over the whole period. AREVA's annual uranium exploration budget is of the order of 10 million.

If applicable, after construction of the plant associated with the mine, mining takes place over periods of 10 to 50 years on average within a defined legal and fiscal framework. Uranium ore is mined from underground or open pit mines. After extraction the ore is milled and the uranium is extracted by acid solutions. The solution obtained precipitated to obtain a dry uranium concentrate (yellow cake) and packaged for shipment to the conversion plants chosen by the customers.

Finally, the rehabilitation of the mining sites is an important activity: Since the beginning of the group's mining activities, a total 400 million euros has been spent on the decommissioning and rehabilitation of the sites of 13 mining sectors in Canada, France, Gabon and the United States. After closure, the land is planted with new vegetation and monitored for radiation for a period of some 10 years.

Market, Competition and Position Held

Global consumption stands at approximately 70,000 tons per year and has been growing slightly for some 5 years. This is explained by connection to the grid of several new reactors and the upgrading of these reactors. In the United States between 1990 and 2000, the upgrading of existing reactors is equivalent to the construction of 26 new 1,000 MWe reactors.

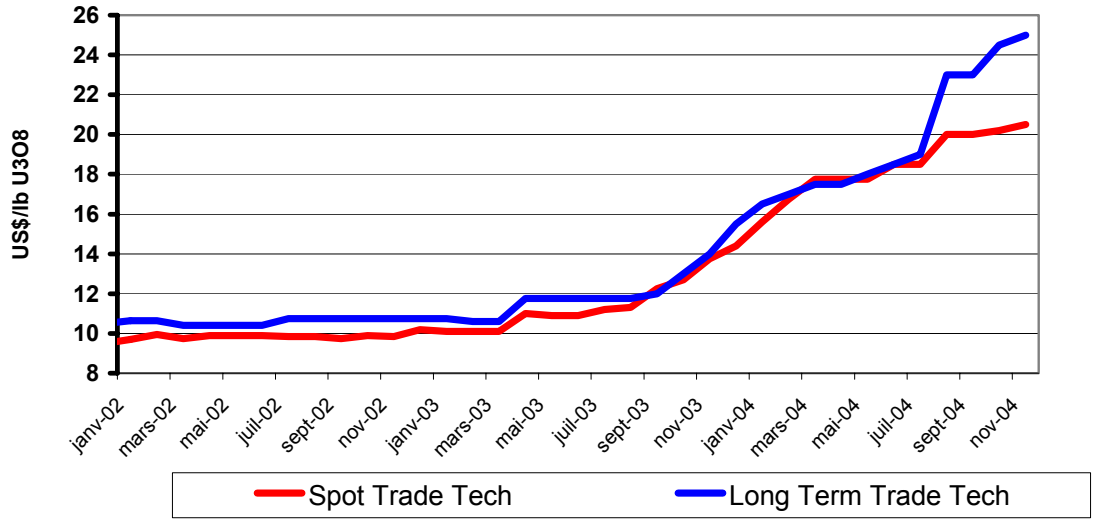
World production represents little over half the demand for uranium. The most typical feature of the uranium market is the imbalance between demand and production: since beginning of the 1990s, over 40% of the requirements were met by so-called secondary resources (destocking of power generation companies or fuel cycle industries, material from the dismantling of nuclear weapons, use of Mox and URE fuel and export of Russian materials). The exhausting of stocks and very clear recent signs of Russian stocks drying up could, over coming years, result in an imbalance between resources and demand and should contribute to reinforcing the upwards trend in the price of uranium noticed since 2003.

The spot price indicators for uranium increased in 2004 by nearly 40% rising from 14.5$/lbU308 at the end of December 2003 to 20.50 $/lb U3O8 at the end of 2004. The long term indices at the end of October are 25 $/lb U3O8.

For operators like AREVA, the impact of this increase, however, remains limited. This is because contracts are entered into for medium/long term periods. The contacts won in 2003 will not produce all their positive effects in terms of turnover and operating results until 2005/2006, and even thereafter.

In geographical terms, nearly half the global uranium production, of the order of 35,000 tU, is located in Canada and Australia, followed by Central Asia (including Russia) and the African continent, as the following table shows.

Evolution des prix spot et long terme selon Trade Tech
(moyenne mensuelle depuis Janvier 2002)



Estimate of Global Uranium Production in 2003 on a Country by Country Basis (35,300 t)

Top 10 Uranium Producing Countries*
Production of concentrates in 2003

Rank	Countries	2003	
1	Canada	10,460	29 %
2	Australia	7,680 t	22 %
3	Niger	3,143 t	9 %
4	Russia	3,073 t	8 %
5	Kazakhstan	2,650 t	7 %
6	Namibia	2,037 t	6 %
7	Uzbekistan	1,600 t	6 %
8	Ukraine	900 t	3 %
9	United-States	800 t	2 %
10	South Africa	760 t	2 %
Total top 10/global production		33,103 t	94 %
Others		2,197 t	6 %
Global production		35,300 t	100 %

4 producers represent over 60% of global production. AREVA produces approximately 16 % of the total. Its three main competitors are Cameco, Rio Tinto and WMCR.

Producer Ranking 2003

1 Cameco	7,127 t	20 %
2 AREVA	5,540 t	16 %
3 ERA/ Rio Tinto	4,355 t	12 %
4 TVEL Russia	3,073 t	9 %
5 WMC/ODM	2,717 t	8 %
6 Kazatomprom	2,615 t	7 %
7 Rössing/Rio Tinto	2,040 t	6 %
8 Navoï/Uzbekistan	1,600 t	5 %
9 Vostgok/Ukraine	900 t	3 %
10 Nufcor/South Africa	760 t	2 %
Total top 10/global production	30,727 t	87 %
Others	4,573 t	13 %
Global production	35,300 t	100 %

AREVA has a competitive advantage in the form of a diversified and structured mining portfolio (three of the four large regions of the world). This means that customers can rest assured of their supply in the framework of long term contracts. In addition to this, AREVA is one of only two groups in the world to take an active research and mining prospecting approach.

AREVA's uranium resources are complemented by some purchases, in particular in the framework of HEU agreements (reuse of uranium from the dismantling of Russian weapons) in which the group participates in the recovery of over 2000 tons per year (until 2013).

Resources and Location of Production

Uranium is present in abundance the world over. There are an estimated 15 million tons. Based on current reactor technology, that means over 200 years' available forward consumption. An even better scenario is foreseeable: Transfer to breeding technologies - one of the approaches explored by the Generation-IV International Forum. So uranium reserves are becoming as important as coal.

Definitions
• "*Reserves*" are defined as the part of resources with the most accurate evaluation for which a feasibility study, or preliminary feasibility study, has been carried out based on calculated or estimated costs. Development costs are the decisive factor in the financial viability of the corresponding project.
• "*Complementary resources*" refer to the part of the resources that are well to fairly well known but for which all evaluations are based on surveys that have not, or not yet, been the subject of a mining feasibility study but whose operation is planned or likely to be planned. They usually account for mineralizations close to ore bodies where mining is in progress.
• "*Reasonably assured resources*" refers to the combined "reserves" and "complementary resources". So they are available in the long or medium term. The tonnages displayed correspond to the amount of metal present in the concentrates when leaving the plant, in the case of uranium, or after refining in the case of gold.
• "*Additional resources*" refers to resources where mining is frozen for administrative reasons or where development depends on more favorable market conditions. The tonnages shown correspond to the amount of metal present in the ore when it leaves the mine: No plant yield rate is applied. Additional development work or modification of startup criteria can mean these resources are classified as "reasonably assured resources".
• "*Global resources*" refers to all categories of resources combined. They provide a good basis for long term comparison of producers' portfolios.
• Resources that are "accessible" to the group, whatever category they are in, are defined as those that can be recovered by the group. AREVA is essentially present in Niger and Canada. The accessible resources, uranium production and their development compared with 2002 can be summarized as follows:

-Group share: tons of uranium in the concentrates

Sites	(**Reasonably assured) resources** 2003	of which reserves	2002	of which reserves	**Production** 2003	2002
France						
SMJ	0	0	0	0	0	11
Lodève	0	0	0	0	9	7
Niger						
Arlit Concession	19,980	0	0	0	0	0
Cominak	21,740	10,970	21,000	11,610	909	909
SOMAÏR	23,260	13,400	23,700	7,040	1,126	1,066
Canada						
Cluff Lake	0	0	0	0	31	1 621
McClean	6,780	6,780	7,150	2,470	1,623	1,641
McArthur (Key Lake)	62,830	50,160	65,800	52,500	1,760	2,158
Midwest	7,990	5,540	7,700	5,540	0	0
Cigar Lake	49,180	32,570	49,900	32,570	0	0
Kazakhstan						
Katco	43,700	30,820	17,600	14,780	82	44
Total	235,460	150,240	192,850	126,510	5,540	7,457

The group's reasonably assured resources amounted, at the end of 2003, to over 40 times the production of 2003 and over 30 times the production of 2002. In addition, by the end of 2003, the group had at its disposal 250,000 tons of additional resources. The group's overall resources (reasonably assured resources and additional resources) therefore amount to 480,000 tons of uranium.

Over and above these resources, AREVA also has access to 23,000 tons of uranium corresponding to its share of HEU (Highly Enriched Uranium) from the dismantling of Russian weapons.

Terms from Images

Image P4	
Place & Corporation names remain the same	
Aéroport	Airport
Usine	Plant
Vers IFEROUANE	To IFEROUANE
EXPLOITE	DEVELOPED
EN EXPLOITATION	OPERATING
PROJET	PLANNED
AKOUTA NORD	NORTH AKOUTA
AKOUTA SUD	SOUTH AKOUTA
Vers IMOURAREN	To IMOURAREN
Image P 6	
CARTE TOPOGRAPHIQUE DU NIGER	TOPOGRAPHICAL MAP OF NIGER
Placenames same	
Ville principale	Main town
Route principale	Main road
Route secondaire	Secondary road
Image P 7	
ALGERIE	ALGERIA
LIBYE	LYBIA
REPUBLIQUE DU NIGER	REPUBLIC OF NIGER
OCEAN ATLANTIQUE	ATLANTIC OCEAN
Other place names same	
Image P 18	
Evolution des prix spot et long terme selon Trade Tech	Evolution of Spot and Long Term Prices According to Trade Tech
Moyenne mensuelle depuis Janvier 2002	Monthly Average Since January 2002
Janv	January
Mars	March
Mai	May
Jul	July
Sept	September
Nov	November